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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/763,823	02/27/2001	Toshifumi Arai	503.39690X00	3739

7590 05/21/2004

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EXAMINER

LONG, HEATHER R

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/763,823

Applicant(s)

ARAI ET AL.

Examiner

Heather R Long

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6 and 9 is/are rejected.
- 7) ☒ Claim(s) 4, 7 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Page 10, line 7 – reference sign “501”. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following figure not mentioned in the description: Fig. 32. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: reference characters VPEN-TIP, VPEN-FRM, VPEN, TIP-SW, POINT-PREF-BTN, STD-PTN, MIN-DIST, PTN-DIC, PROC-TAB, PROC-TAB, PROC-COUNT, PROC-TAB-ELM, TIP-FIELD, PROC-FIELD, ACT-COUNT, ACT-TAB-ELM, PTN-ID2, ACT-FIELD, ACT-TAB, IP-AREA, MSG-AREA, PB-AREA; which are all found throughout several figures. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to

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avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities:
 - a. Page 9, line 6: change " penholder 103" to --penholder 201--.Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Taguchi et al. (U.S. Patent 5,774,602).

Regarding claims 1 and 2, Taguchi et al. discloses in Fig. 18 a pen type input device with a camera including a pen (86) and a camera (71) mounting on the pen (86) and picking-up an image of a penpoint, wherein the camera (71) is mounted on the pen (86) so that a center position of the image picked up by the camera (71) is located at left or right side of the tip end of the pen (86) (col. 6, lines 20-22; col. 14, lines 16-24). Since the camera as disclosed by Taguchi et al. is removable one could position the

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camera anywhere on the pen, whether it be on the right side or the left side of the pen depends on the like of the user.

Regarding claim 3, Taguchi et al. discloses in Fig. 18 a pen type device with a camera (71) wherein the camera (71) is mounted on the pen (86) so that the camera (71) may pivot relative to the penholder within a range at least 0 to 90° (col. 6, lines 20-22; col. 14, lines 16-24). It is inherent that if the camera is removable then the camera may pivot relative to the penholder within a range of at least 0 to 90°.

7. Claims 5, 6, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Toshifumi et al. ("PaperLink: A Technique for Hyperlinking from Real Paper to Electronic Content").

Regarding claim 5, Toshifumi et al. discloses a pen type input device with a camera including a pen, a camera mounting on the pen and picking-up an image of a penpoint, and an information processing apparatus performing process of an image picked up the camera, wherein the information processing apparatus extracts an object to be processed from an image picked up by the camera, determines a process to be executed from the picked-up image, and performs process of the extracted object (sections: The Videopen and Interaction, pages 328-330; Figs. 2-7).

As interpreted by the Examiner: As can be seen from Figs. 2-4 Toshifumi et al. discloses a camera mounted on a pen, wherein the camera picks up an image of the penpoint. Furthermore, after the image

is taken the information processing apparatus extracts an object to be processed (either a word or a highlighted word) from the picked-up image, determines a process to be executed from the picked up image (if the object is a highlighted word (page 328-329), the information processing apparatus establishes a hyperlink; and if the object is only a piece of text (page 329), the information processing apparatus classifies the text as data and not a hyperlink), and performs a process of the extracted data (if the object was highlighted text then a hyperlink is created and if the object was only text then the text is considered data and stored in a buffer for later use).

Regarding claim 6, Toshifumi et al. discloses a pen type input device with a camera wherein the information processing apparatus determines a process to be executed on the basis of a color picked up by the camera (sections: The Videopen and Interaction, pages 328-330; Figs. 2-7; section: Implementation Details – Structural Overview, page 330). Toshifumi et al. discloses that if a colored region is found around the center of the image, the segmentation unit extracts the region; otherwise, the unit extracts the black and white pattern corresponding to the text itself. Toshifumi et al. also discloses that if there is a highlighted region then a hyperlink will be established and if there is no highlighted region then the object extracted is regarded as data and stored in a buffer for later use.

Regarding claim 9, Toshifumi et al. discloses a pen type input device with a camera including a pen, a camera mounting on the pen and picking-up an image of a penpoint, and an information processing apparatus performing process of an image picked up by the camera, wherein the information processing apparatus extracts a standard pattern picked up by the camera and extracts an object by correcting an image picked up on the basis of a result of extraction (section: Implementation Details – Segmentation and Pattern Recognition, pages 330-331).

As interpreted by the Examiner: As can be seen from Figs. 2-4 Toshifumi et al. discloses a camera mounted on a pen, wherein the camera picks up an image of the penpoint. Furthermore, after the image is taken the information processing apparatus extracts a standard pattern (the highlighted region) from the image and extracts an object by correcting an image picked up on the basis of a result of extraction (the highlighted region is corrected by passing the highlighted region through an additional filter and the object extracted is the text that was highlighted).

Allowable Subject Matter

8. Claims 4 and 7-8 are allowed.
9. The following is an examiner's statement of reasons for allowance: prior art fails to teach or fairly suggest a pen type input device with a camera including a pen, a camera mounting on the pen and picking-up an image of a penpoint,

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and an information processing apparatus performing process of an image picked up by the camera, wherein....

- a.the information processing apparatus makes judgment of an orientation of an objective image picked up by the camera depending upon a position of a tip end of the pen in the image picked-up by the camera (claim 4).
- b.the information processing apparatus detects position of the object extracted from the image picked by the camera and the penpoint to display an image indicating pointing of the pen on the basis of the result of detection (claims 7 and 8).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Tano et al. (U.S. Patent 5,850,058) discloses a pen with a camera mounted to it used in combination with a tablet includes an image reconfiguring unit for composing, after correcting image distortion generated due to inclination of the pen body for each image in the vicinity of a pen head which is photographed along with the strokes of the input

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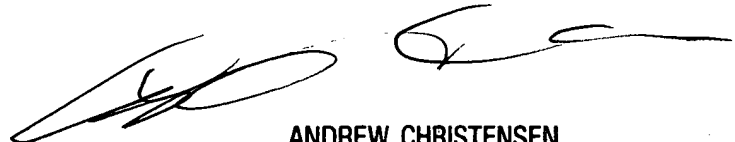
pen by a CCD camera, the series of image into of images into a general image.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heather R Long whose telephone number is 703-305-0681. The examiner can normally be reached on Mon.-Thurs.: 7:00 am - 4:30 pm, and every other Fri.: 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HRL
May 17, 2004



ANDREW CHRISTENSEN
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